

Bridging the Ped/Bike Exposure Gap

Joe Santos, State Safety Engineer, FDOT, CO
Deborah Tyrone, District Bicycle/Pedestrian Coordinator, FDOT, D5
DeWayne Carver, State Bicycle/Pedestrian Coordinator, FDOT, CO

Poll Slide #1

What influenced you to attend this session?

- 1. Recommended by a co-worker
- 2. My Boss
- 3. Interest in the topic
- 4. Related to my job



Poll Slide #2

Employer/representation

- Federal Government
- State Government
- 3. Local Government
- 4. Consultant
- 5. General Public



Bridging the Ped/Bike Data Exposure Gap

- Setting the stage Joe Santos
- FDOT District 5 Trans Ped Deborah Tyrone
- Non-Motorized Transportation Count Data Collection Study

 – DeWayne Carver
- Questions?



Bridging the Ped/Bike Data Exposure Gap

Setting the stage

Joe Santos, PE, State Safety Engineer, FDOT, CO



Bridging the Ped/Bike Data Gap

- Setting the stage5 simple questions:
 - 1. Why the topic?
 - 2. What exposure data are we talking about?
 - 3. What are the opportunities?
 - 4. Where do we need to go?
 - 5. How do we get there?







An Interactive Pedestrian and Bicycle Planning Tool

Deborah Tyrone

FDOT District 5
Pedestrian and Bicycle Coordinator

What is TransPed?

- Data visualization tool
- Analysis and prioritization tool for FDOT D5 sidewalk gaps
- Data repository for all pedestrian and bicycle relevant information



Getting Started

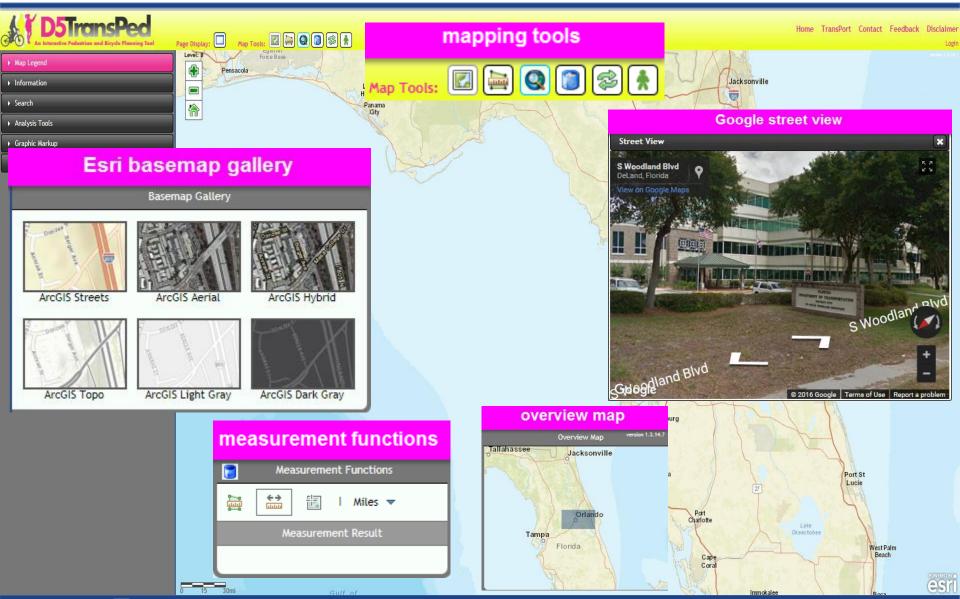


http://cfgis.org/FDOT-Resources/TransPed.aspx

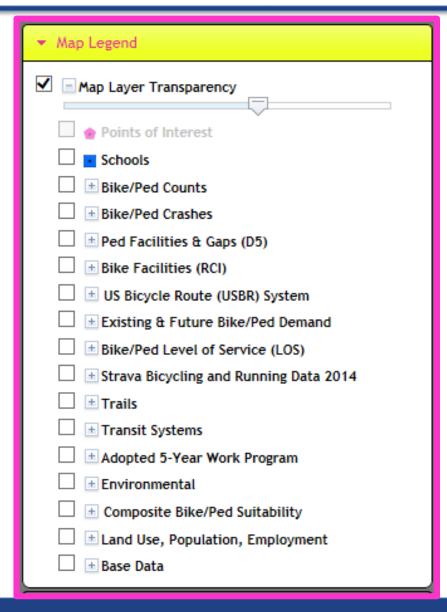




GIS Map Functionalities

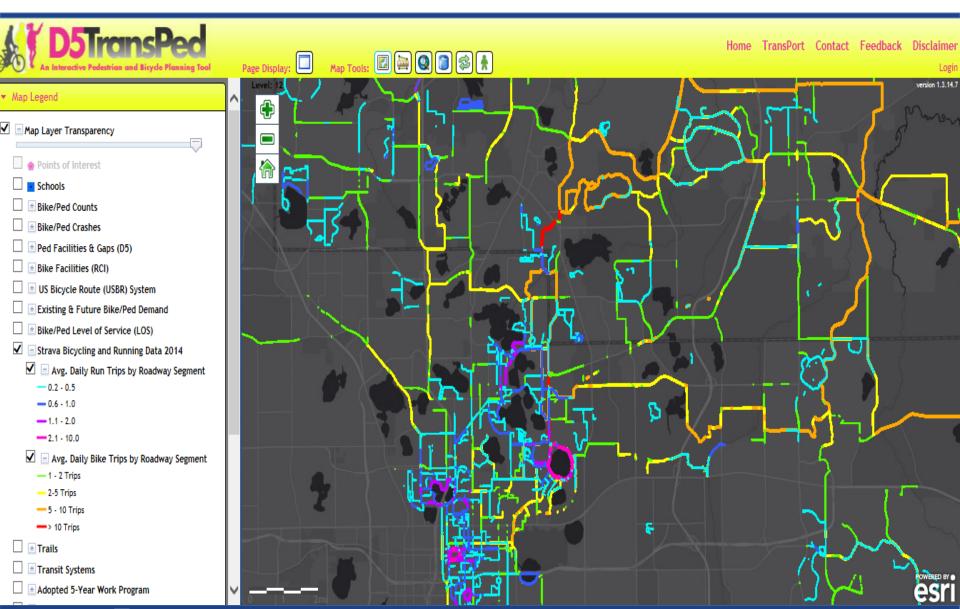


Comprehensive Data Layers



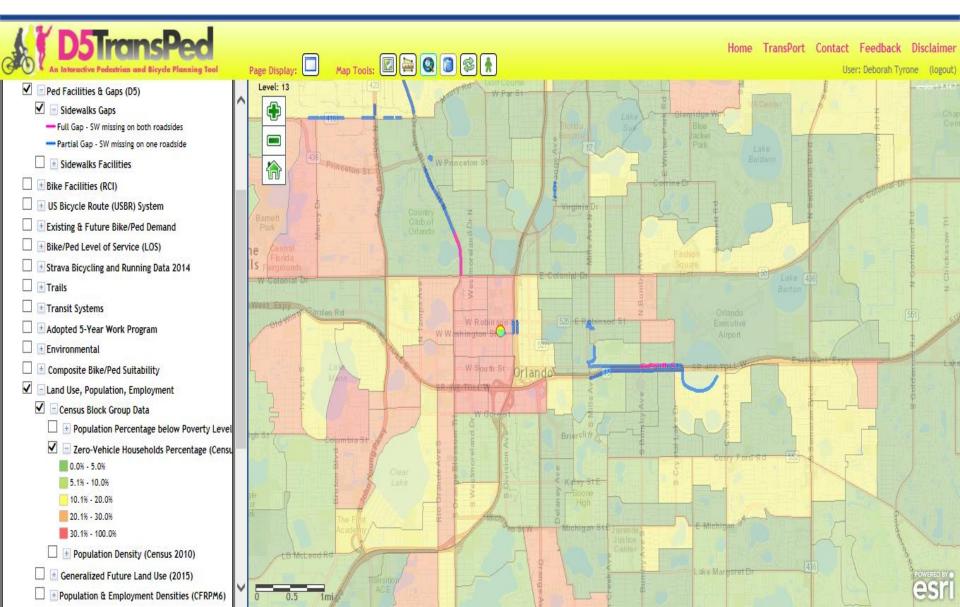


TransPed – Data Visualization





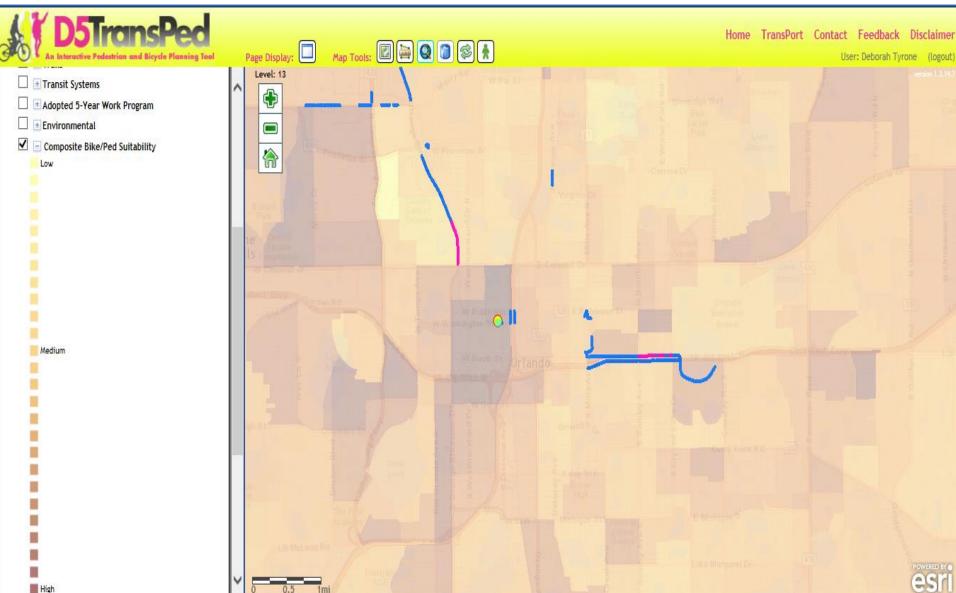
Socio-Economic & Land Use Characteristics







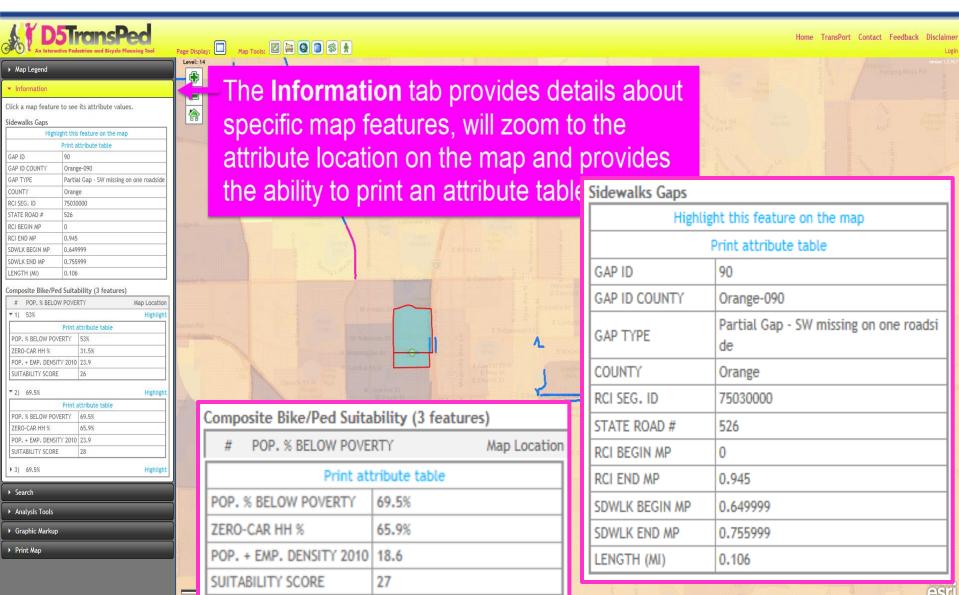
Composite Bike/Ped Suitability Index







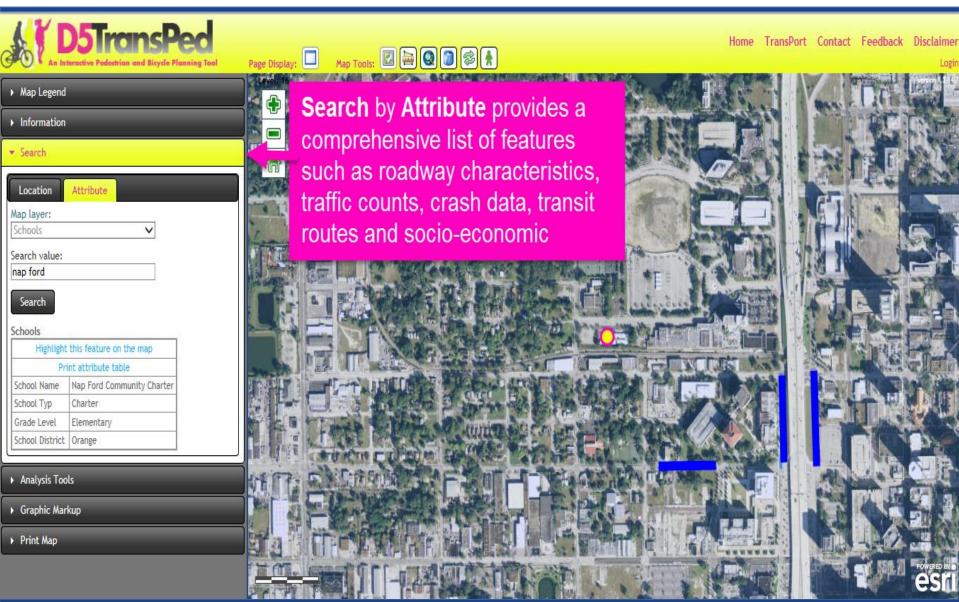
Detailed Feature Information





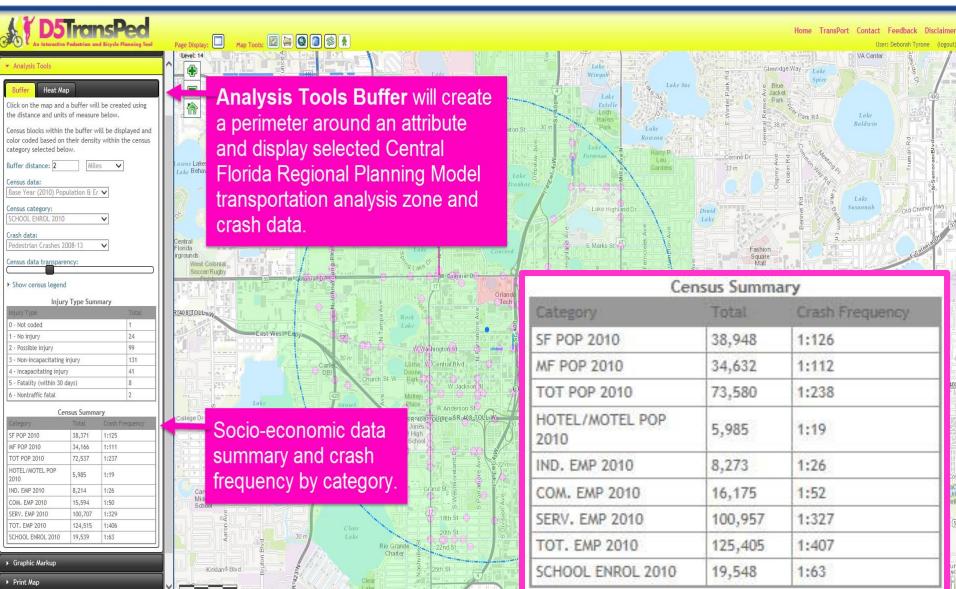


Search





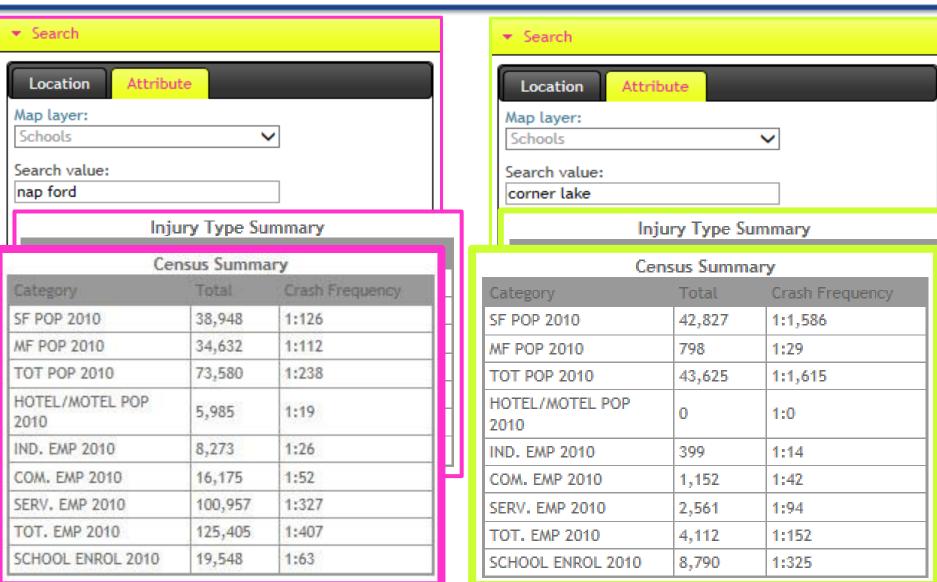
Analysis Tool







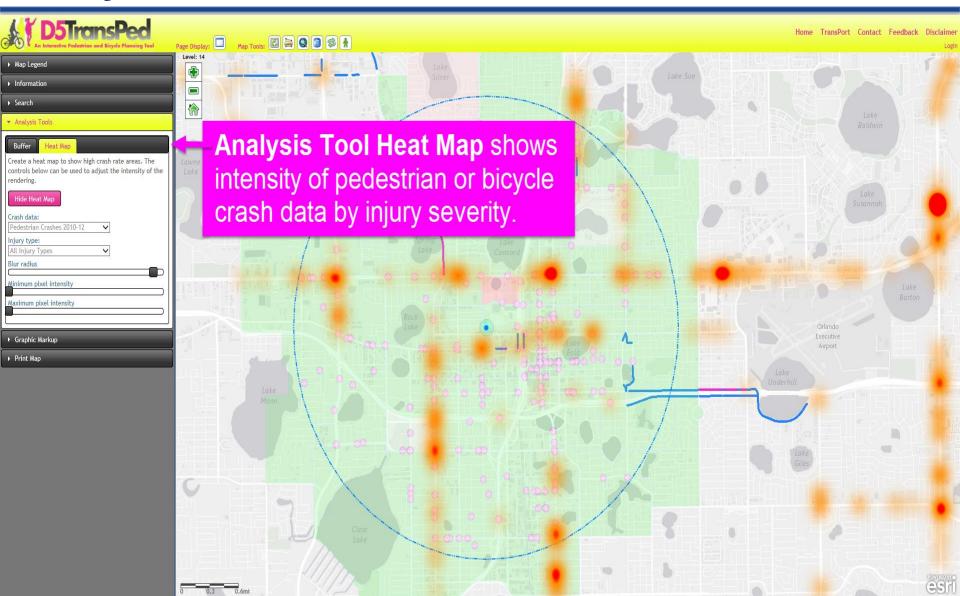
Analysis Tool – Comparison Example







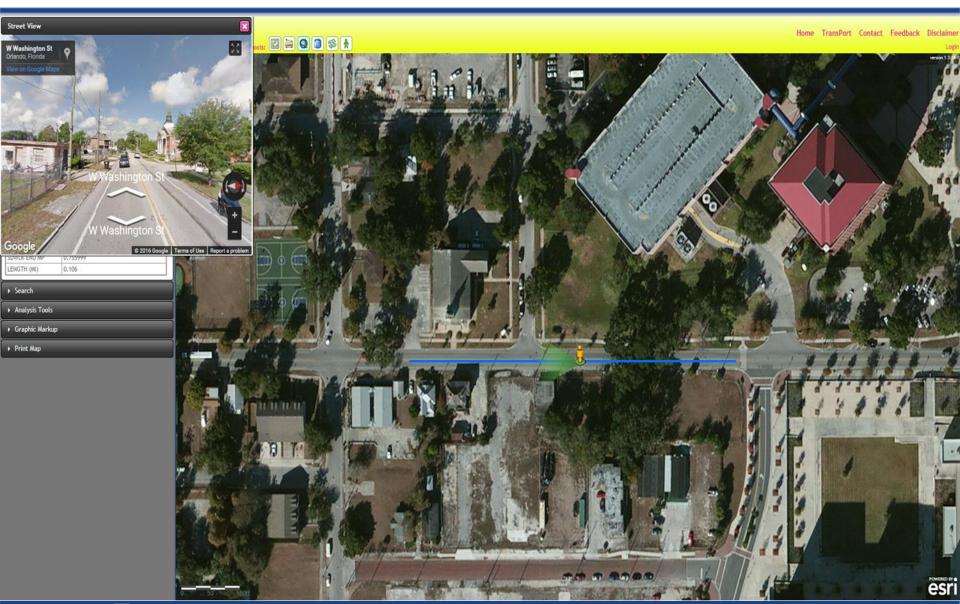
Analysis Tool







Street View



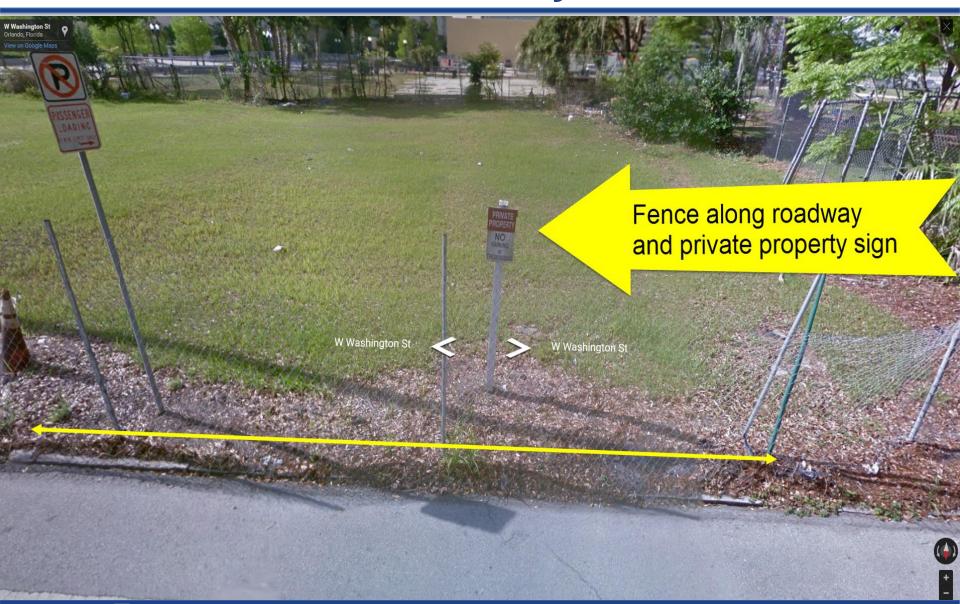
Street View Constructability Review



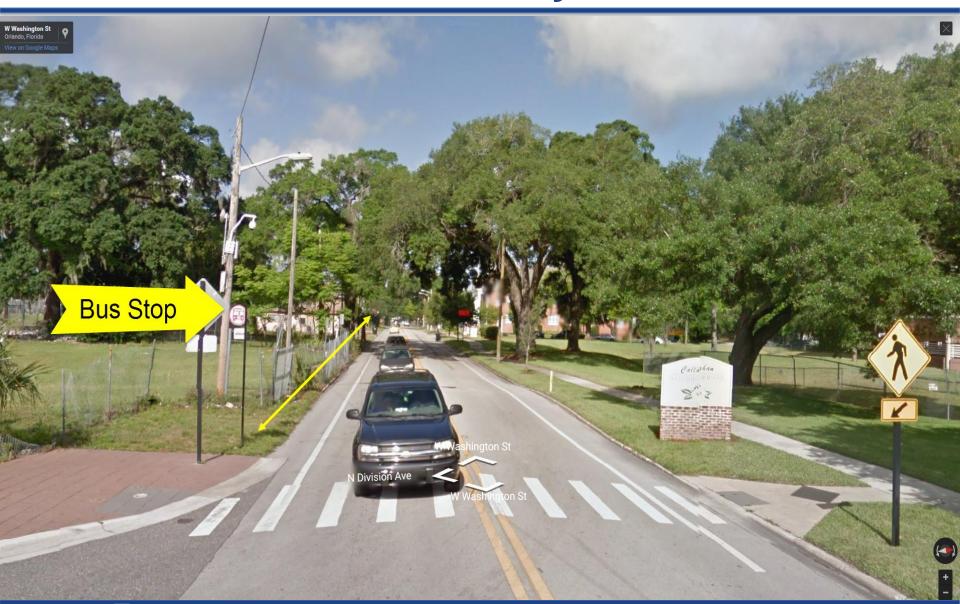




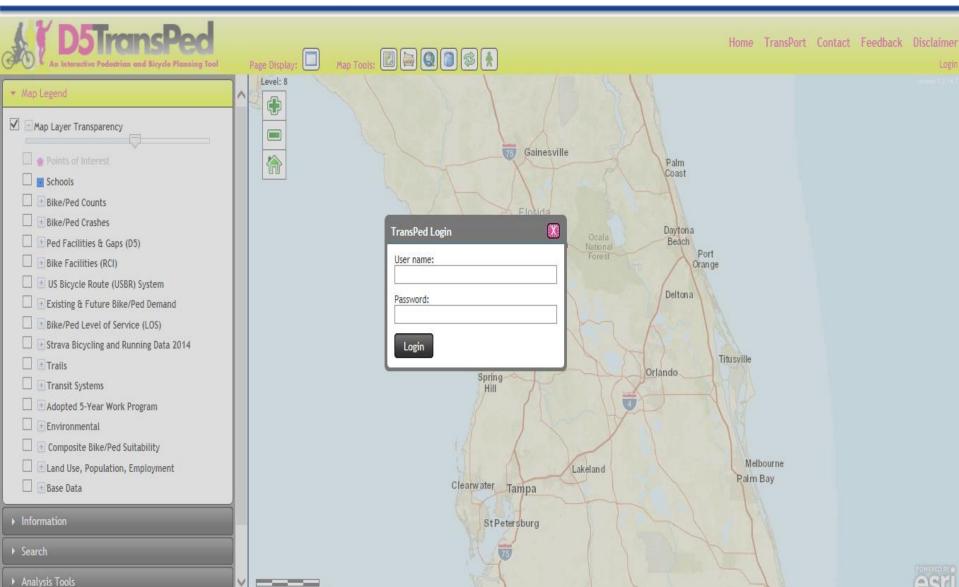
Street View Constructability Review



Street View Constructability Review



TransPed – Analysis & Prioritization

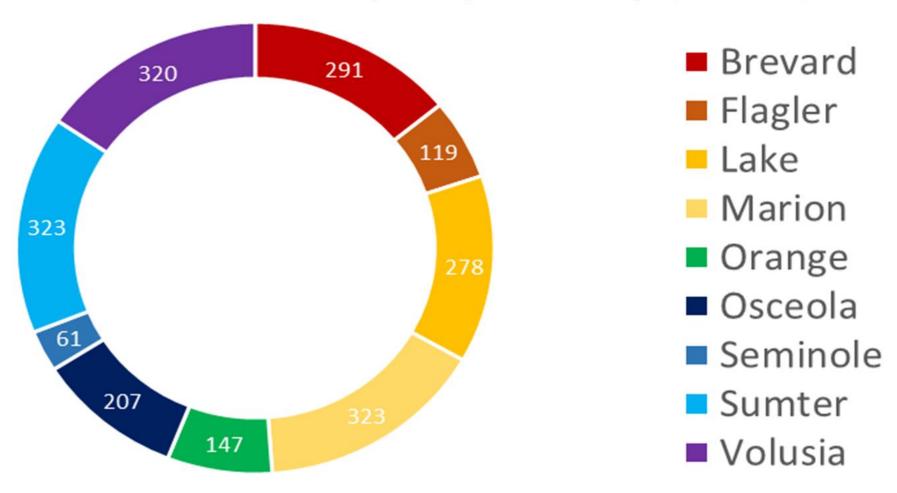






TransPed – Analysis & Prioritization

Sidewalk Gaps by County (miles)





Sidewalk Gap Analysis & Prioritization



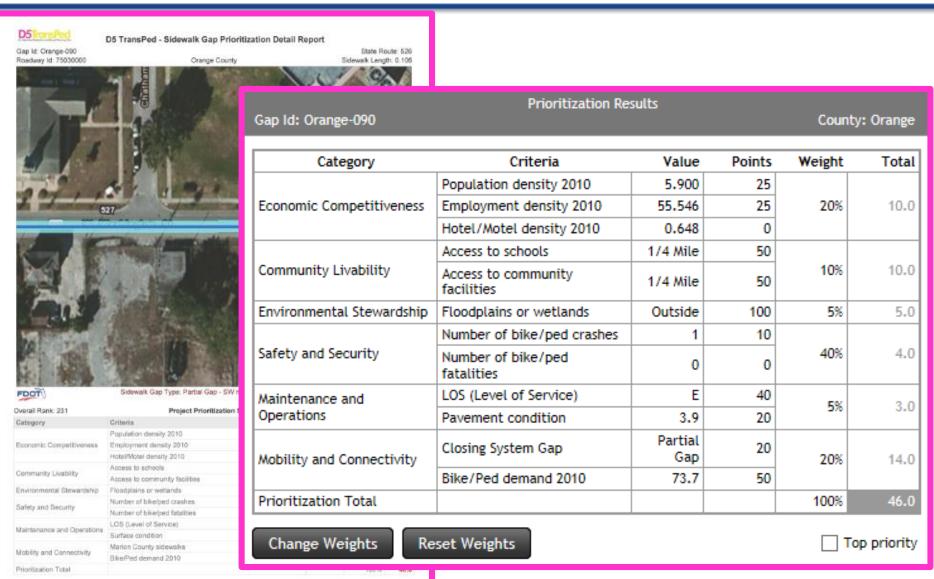
Florida Transportation Plan

- Economic Competitiveness
- Community Livability
- Environmental Stewardship
- Safety and Security
- Maintenance and Operations
- Mobility and Connectivity





Report Production – Individual Segment







Report Production – Excel Spreadsheet

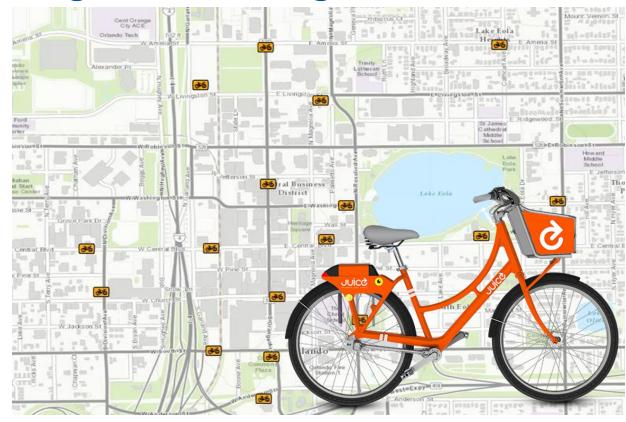
1	RANK	RANK D	5 GAP ID	GAP TYPE	STATE ROAD	ROADWAY	ID BEGIN MP	END MP	GAP LENGTH	SCORE	GOOGLE STREET VIEW
2	1	4	Brevard-10	06 Partial Gap - SW missing on one roadside	SR A1A	70060000	18.046	20.516	2.470	84	http://maps.google.com/maps?q=&layer=c&cbll=28.1158493070396,-80.5747443247724
3	2	8		27 Full Gap - SW missing on both roadsides	SR 5	70020000	9.470	16.130	6.660	82	http://maps.google.com/maps?q=&layer=c&cbll=28.2470962416844,-80.6799821987843
4	3	13		32 Full Gap - SW missing on both roadsides		70020000	23.775	25.715	1.940	76.5	http://maps.google.com/maps?q=&layer=c&cbll=28.4054123929037,-80.7550118760017
5	4	15		42 Full Gap - SW missing on both roadsides		70020000	28.664	29.824	1.160	74	http://maps.google.com/maps?q=&layer=c&cbll=28.4695245326577,-80.7659000969385
6	5	17		89 Full Gap - SW missing on both roadsides		70100000	5.046	5.805	0.759	73.5	http://maps.google.com/maps?q=&layer=c&cbll=28.3593468092405,-80.7858512635081
7	6	20		10 Full Gap - SW missing on both roadsides	A 10.00 A 10.00	70010000	2.333	13.333	11.000	73	http://maps.google.com/maps?q=&layer=c&cbll=27.9579208611623,-80.5391269829257
8	7	37		34 Full Gap - SW missing on both roadsides		70020000	25.819	26.622	0.803	67	http://maps.google.com/maps?q=&layer=c&cbll=28.4264715365288,-80.7582485072445
9	8	38	_	84 Partial Gap - SW missing on one roadside	_	70080000	0.755	0.785	0.030	66.5	http://maps.google.com/maps?q=&layer=c&cbll=28.3687661483437,-80.6055907445907
10	9	41		25 Partial Gap - SW missing on one roadside		70120000	7.701	7.833	0.132	65.5	http://maps.google.com/maps?q=&layer=c&cbll=28.1385809744767,-80.5913279529698
11	10	45		91 Full Gap - SW missing on both roadsides		70100000	5.844	7.364	1.520	65	http://maps.google.com/maps?q=&layer=c&cbll=28.3556487753734,-80.767558675079
12	11	47	_	00 Partial Gap - SW missing on one roadside	SR 520	70100000	13.967	15.867	1.900	64.5	http://maps.google.com/maps?q=&layer=c&cbll=28.3576601632203,-80.6311664935665
13	12	52		14 Full Gap - SW missing on both roadsides	- CONTRACTOR - CON	70010000	14.245	15.255	1.010	64	http://maps.google.com/maps?q=&layer=c&cbll=28.0471266399437,-80.5867664793001
14	13	56	_	11 Partial Gap - SW missing on one roadside		70060000	22.731	23.053	0.322	63	http://maps.google.com/maps?q=&layer=c&cbll=28.1669351060782,-80.5880935305495
15	14	60	_	41 Partial Gap - SW missing on one roadside		70020000	27.854	28.664	0.810	62	http://maps.google.com/maps?q=&layer=c&cbll=28.4555580499862,-80.7628998160997
16	15	61		61 Full Gap - SW missing on both roadsides		70180000	3.836	6.742	2.906	61.5	http://maps.google.com/maps?q=&layer=c&cbll=27.9980141776716,-80.5861506019436
17	16	70	_	12 Full Gap - SW missing on both roadsides		70110000	0.000	5.270	5.270	60	http://maps.google.com/maps?q=&layer=c&cbll=28.5492948520265,-80.8923361151138
18	17	67	_	87 Full Gap - SW missing on both roadsides		70100000	4.720	5.024	0.304	60	http://maps.google.com/maps?q=&layer=c&cbll=28.359727837278,-80.7948907939186
19	18	74		02 Full Gap - SW missing on both roadsides		70001000	0.189	4.406	4.217	59.5	http://maps.google.com/maps?q=&layer=c&cbll=28.532777666441,-80.8204898777254
20	19	88	_	28 Full Gap - SW missing on both roadsides		70060000	29.452	30.337	0.885	57	http://maps.google.com/maps?q=&layer=c&cbll=28.2673359878015,-80.6060901600371
21	20	92	_	30 Full Gap - SW missing on both roadsides		70060000	30.355	30.376	0.021	56.5	http://maps.google.com/maps?q=&layer=c&cbll=28.2741281598856,-80.6069101798506
22	77.5	99		30 Full Gap - SW missing on both roadsides	Brounday.	70020000	21.369	23.679	2.310	55.5	http://maps.google.com/maps?q=&layer=c&cbll=28.3769712953073,-80.7379659028837
23		111		35 Partial Gap - SW missing on one roadside		70020000	26.640	26.681	0.041	54	http://maps.google.com/maps?q=&layer=c&cbll=28.432653235225,-80.7601034427257
24		112	Brevard-06	61 Full Gap - SW missing on both roadsides		70022000	38.716	38.975	0.259	53.5	http://maps.google.com/maps?q=&layer=c&cbll=28.0945596998433,-80.6284101752209
25		118		12 Partial Gap - SW missing on one roadside	5 1500000000000000000000000000000000000	70060000	23.094	24.045	0.951	53	http://maps.google.com/maps?q=&layer=c&cbll=28.1765198854939,-80.5905805137807
26	25	120	Brevard-23	33 Full Gap - SW missing on both roadsides	SR3	70140000	3.096	3.150	0.054	53	http://maps.google.com/maps?q=&layer=c&cbll=28.4018607965819,-80.7054625211405





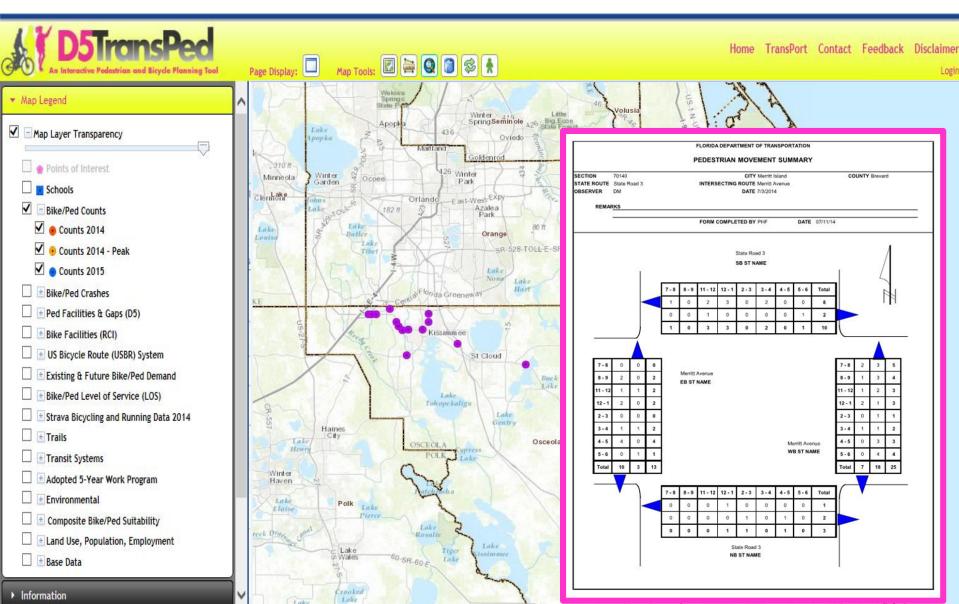
TransPed – Data Bank

- Roadway Characteristics Inventory
- Central Florida Regional Planning Model TAZ
- Land use
- Transit
- Bikeshare
- Crashes
- Traffic counts



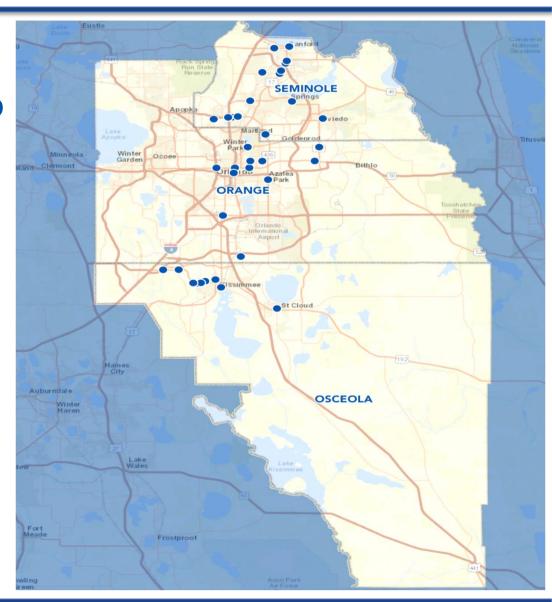


Ped/Bike Traffic Counts





- Year-long pilot project with MetroPlan Orlando
- 55 locations throughout the tri-county area (Orange, Osceola and Seminole)





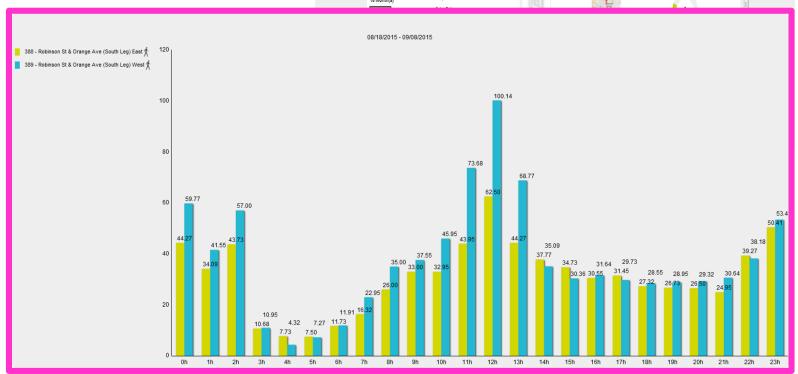


http://www.eco-compteur.com/en/products/pyro-range/pyro-box



- Automatic reporting to website
- Customized reports





http://www.eco-compteur.com/en/products/pyro-range/pyro-box





City of Orlando

ORLANDO COUN 15

A LOOK AT ORLANDO BIKE AND PEDESTRIANS COUNTS

LAKE BALDWIN

TOTAL BIKES & PEDESTRIANS



DAILY AVERAGE 815 PEAK HOUR

PEAK DAY OF THE WEEK: SUNDAY

For more information, please visit CITYOFORLANDO.NET/



CADY WAY TRAIL

TOTAL BIKES & PEDESTRIANS

PEAK DAY DAILY AVERAGE

PEAK HOUR

PEAK DAY OF THE WEEK: SUNDAY

Count taken from first install date. July 9 - August 9, 2015.

The bicycle and pedestrian counters used by the City of Orlando only detect users that pass by the counting device, which may not account for all users.

A MESSAGE FROM THE MAYOR

I am excited to share the City of Orlando's first annual report on bicycle and pedestrian counts.

As Mayor, one of my top priorities is expanding and enhancing our transportation options to connect more of our residents with access to jobs and opportunity, active lifestyles and reduce our impact on the environment.

Ensuring that these options are safe is a key component to the City's focus. We have made significant investments in infrastructure improvements to enhance safety for our bicyclists and pedestrians including adopting a complete streets policy, adding new sidewalks, enhancing pedestrian signals with audible countdowns. installing bike repair stations and wayfinding signage, expanding our bike trails and later this year marking the first sharrow route to connect our Orlando Urban Trail to the Cady Way Trail.

To further this initiative, I joined the U.S. Department of Transportation Mayor's Challenge for Safer People, Safer Streets to engage with other municipalities in their efforts and share best practices as we move the needle on pedestrian and biking safety in our city.

As a part of this initiative, we have employed the use of pedestrian and bicycle counts that will help us to understand the needs in our community and to prioritize where to invest more resources and make enhancements.

I'm proud of the progress that we have made so far and look forward to ensuring that as our city continues to grow, our efforts to enhance the safety of bicyclists and pedestrians continues to grow.





ORLANDOCOUNTS



Manual Ped/Bike Traffic Counts

- National Bicycle and Pedestrian Documentation Project
- Annual nationwide count in September
- Simple data collection



Homo Partici

Participate Downloads



Count Dates:

The next count/survey days are May 16-22, 2016.

Upcoming days through 2016 are:

May 16-22, 2016 Sept 13-18, 2016

About

One of the greatest challenges facing the bicycle and pedestrian field is the lack of documentation on usage and demand. Without accurate and consistent demand and usage figures, it is difficult to measure the positive benefits of investments in these modes, especially when compared to the other transportation modes such as the private automobile. An answer to this need for data is the National Bicycle & Pedestrian Documentation Project, cosponsored by and Alta Planning and Design and the Institute of Transportation Engineers (ITE) Pedestrian and Bicycle Council. This nationwide effort provides a consistent model of data collection and ongoing data for use by planners, governments, and bicycle and pedestrian professionals.

Methodology

The basic assumptions of the methodology are that, in order to estimate existing and future bicycle and pedestrian demand and activity, agencies nationwide need to start conducting counts and surveys in a consistent manner similar to those being used by ITE and other groups for motor vehicle

NBPD to Provide Free Summary Reports!

The National Bicycle and Pedestrian Documentation Project has developed a summary report that highlights the valuable information that can be gained from year-long automatic bicycle and pedestrian counts. If your community uses Eco-Counter automatic count technology, the National Bicycle and Pedestrian Documentation Project will provide a free summary report of the data in exchange for submission of the annual automatic count data to the project. This report puts valuable information regarding usage and trends at your fingertips which can be used in grant applications, press releases, annual count reports, etc. Sample reports are available here and here. Email your Eco-Counter data in excel format to data@bikepeddocumentation.org. Please indicate the exact location of the automatic counter and tell us a bit about the bicycle or pedestrian facility.

News

- Update to the National Cooperative Highway Research Program Report 797: NCHRP 797 Errata. This document corrects the
 results on piezoelectric strips. The corrected analysis of the counter shows that it was both highly precise and accurate.
 However, the researchers note that only one piezoelectric strip counter was tested and recommend further research.
- The National Cooperative Highway Research Program Report 797: <u>Guidebook on Pedestrian and Bicycle Volume Data</u>

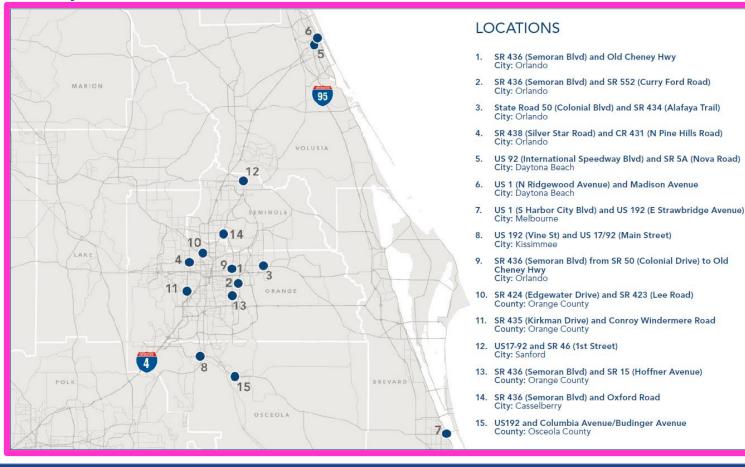
http://bikepeddocumentation.org/





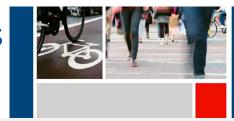
Manual Ped/Bike Traffic Counts

- 15 locations districtwide
- 2 consecutive years



Manual Ped/Bike Traffic Counts

- Annual 72/48 hour counts
- Detailed information

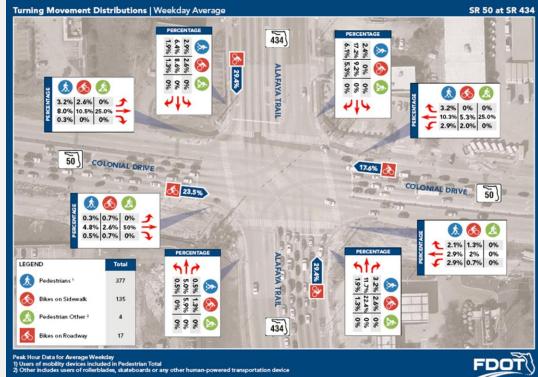






SR 50 at SR 434 | Average Weekday Peak Hour

Weekday										
Time	Pedestrian Total	ADA	Bike Total	Bikes on Sidewalk	Bikes on Road	Other	Total Users			
12:00 AM	0	0	2	2	0	0	2			
1:00 AM	0	0	1	1	0	0	1			
2:00 AM	0	0	0	0	0	0	0			
3:00 AM	0	0	0	0	0	0	0			
4:00 AM	1	0	2	2	0	0	3			
5:00 AM	9	0	3	3	0	0	12			
6:00 AM	13	0	2	1	1	0	15			
7:00 AM	14	0	4	3	1	1	19			
8:00 AM	32	0	13	12	1	0	45			
9:00 AM	25	0	5	5	0	2	32			
10:00 AM	26	0	10	9	1	0	36			
11:00 AM	17	0	3	3	0	0	20			
12:00 PM	13	0	6	6	0	0	19			
1:00 PM	19	0	4	4	0	0	23			
2:00 PM	27	0	9	8	1	0	36			
3:00 PM	21	1	10	9	1	0	31			
4:00 PM	40	0	11	11	0	0	51			
5:00 PM	33	1	12	12	0	0	45			
6:00 PM	26	0	13	13	0	0	39			
7:00 PM	25	0	8	8	0	1	34			
8:00 PM	20	0	6	6	0	0	26			
9:00 PM	9	0	11	9	2	0	20			
10:00 PM	4	0	10	4	6	0	14			
11:00 PM	3	0	7	4	3	0	10			

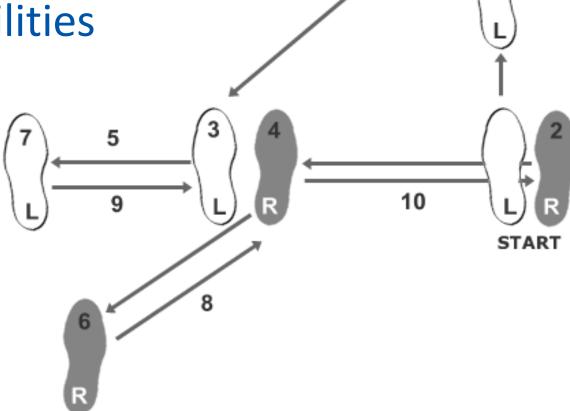






Next Steps

- Health indicators
- Complete Streets analysis
- Data for local facilities





Data Driven Approach to Improvements

FHWA Announces New Safety Performance Measures, Including Bicycle-Pedestrian Safety

WASHINGTON - The U.S. Department of Transportation's Federal Highway Administration (FHWA) today published new safety performance measures as part of its national safety program, calling for state and regional targets to help reduce highway deaths and injuries, including for the first time, those among people walking and bicycling. The new regulations call for improved data on roadway features and a consistent definition of serious injuries.

said U.S. Transport:

and safety for bicyc

management require evaluate and report

"Together, the rules

"The Department has "Together, the rules will The addition of bic enhance a data-driven approach

The safety performs to making safety decisions, improve collaboration across a

transparency for the wide range of safety partners, report on safety tars wide range of safety partners, and provide transparency for the

American public..."

FHWA Administrator Gregory Nadeau





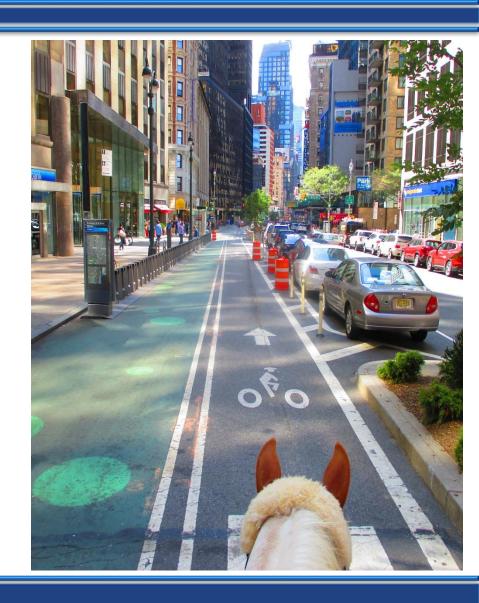


Deborah Tyrone

FDOT - District 5
Pedestrian/Bicycle Coordinator
(407) 482-7897
Deborah.Tyrone@dot.state.fl.us

John "Sugar Daddy" Zielinski

FDOT – District 5 SIS Administrator (407) 482-7868 John.Zielinski@dot.state.fl.us



Bridging the Ped/Bike Data Exposure Gap

Non-Motorized Transportation Count Data Collection Study

DeWayne Carver, AICP, State Bicycle/Pedestrian Coordinator



What is the purpose?

- To better understand the performance of the non-motorized transportation system in Florida.
 - Develop a statewide standardized methodology for counting non-motorized transportation users.

Who is involved?

 The Florida Department of Transportation's (FDOT) Statistics Office, Safety Office, Systems Planning Office, Office of Policy Planning, District Pedestrian/Bicycle Safety Champions, District Pedestrian/Bicycle Coordinators, CDM Smith, and Marlin Engineering

Who is this for?

 Florida Governmental agencies, MPOs, counties, cities and stakeholders who wish to better understand the use of the bicycle and pedestrian network





Recommendations for:

- FDOT statewide ped/bike count program
- Appropriate technologies by count purpose, budget, timeframe etc.
- Appropriate locations to count: network, facility, placement of count equipment
- Frequency and duration
- Partners
- Factoring short term counts to average annualized counts
- Coordination with crash data
- Coordination with FAST Act & FDOT performance measures



Г	ACTIVITY	2016											
L	ACTIVITY	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPT	ОСТ	NOV	DEC
1	Project Coordination & Workshops	\star		7	*	\star				\star		\star	
l	Project Stakeholder Workshop				*	*	*						
2	Develop Count Procedures		\Rightarrow										
l	Literature Review			* *									
ı	Taxonomy			7		*							
L	Draft Recommendations							7	١.		*	T	
3	Pilot Test						>			\	★		
4	Final Report											*	\rightarrow
Meeting Draft Tech Memo Final Tech Memo Draft Final Report Final Report													

Progress:

- Draft literature review complete
- One-on-one meetings with internal stakeholders
- Statewide survey identified existing FL count programs

- Survey results being compiled and analyzed
- Technical Team meeting to discuss products this week

Project Contacts:

James Whitley
FDOT
(850) 921-7378
James.Whitley@dot.state.fl.us

Martin Guttenplan, AICP

CDM Smith (850) 386-9528 guttenplanME@cdmsmith.com

Nathan Hicks

hicksna@cdmsmith.com



Bridging the Ped/Bike Data Exposure Gap

CONTACT INFORMATION

DeWayne Carver, AICP
State Bicycle/Pedestrian Coordinator
FDOT, Roadway Design Office, Central Office (Tallahassee)
(850) 414-4322
dewayne.carver@dot.state.fl.us

Deborah Tyrone
Bicycle/Pedestrian Coordinator
FDOT, District 5 (Orlando)
(407) 482-7897
deborah.tyrone@dot.state.fl.us

Joe Santos, PE State Safety Engineer FDOT, State Safety Office, Central Office (Tallahassee) (850) 414-4097

Joseph.santos@dot.state.fl.us





Questions?